New Jersey Department of Environmental Protection
Division of Air Quality
Bureau of Air Quality Evaluation

RISK SCREENING POLICY AND SECOND-LEVEL RISK SCREENING

Risk Screening Policy

The following risk management policy is in effect for the risk screening worksheet/spreadsheet (first-level risk screening).

A. Carcinogens (Cancer-Causing Chemicals)

- Total incremental risk less than or equal to 1×10^{-6} (1E-6, or 1 in a million) is considered negligible.
- Total incremental risk greater than 1×10^{-6} is referred for second-level risk screening, described below.

B. Noncarcinogens

- Total hazard index less than or equal to 1 is considered negligible.
- Total hazard index greater than 1 is referred for second-level risk screening, described below.

ROUNDING: Values less than or equal to 1.5 should be rounded down to 1.

If a source fails first-level risk screening, the applicant can modify the permit application, or the Bureau of Air Quality Evaluation (BAQEv) will conduct a second-level risk screening. The second-level risk screening can also be carried out by the applicant, with verbal approval from BAQEv. A modeling protocol is not required.

PERMIT MODIFICATION ALTERNATIVE

As an alternative to a second-level risk screening, the permit application may be modified by the applicant so that the calculated risk falls into the "negligible" category using the risk screening worksheet/spreadsheet.

Modifications can include a reduction in emissions, an increase in stack height, or a reduction in operating hours.

INFORMATION REQUIRED FOR SECOND-LEVEL RISK SCREENING

For second-level risk screening, BAQEv carries out a site-specific air quality dispersion modeling analysis to more accurately estimate ambient air concentrations, and to assess the effect of aerodynamic downwash on plume dispersion. This analysis takes into account actual site conditions, source parameters, and meteorology. In order to do this, the applicant must provide to BAQEv a **detailed plot plan** with the information listed below.

Note that incomplete plot plans will not be accepted!

1. A depiction of the site, drawn to scale (with the scale indicated)

2. Location of: All proposed emission points (stacks, vents, etc.)
   All buildings and structures on-site
   Facility property line

3. Location of buildings and structures immediately adjacent to the applicant's property, if they are located near the proposed emission points.

4. Height, width, and length of all buildings and structures.

5. An indication of true north. (If plant north is shown on the plot plan, the relationship between true north and plant north must be provided.)

6. In addition, a scaled map with the location of nearby residences and other sensitive receptors, such as hospitals, nursing homes, schools, and day care centers.

Contact BAQEv at 609-633-1110 if specific guidance is needed concerning the plot plan.

The second-level risk screening analysis done by BAQEv often predicts air concentrations lower than those estimated with the risk screening worksheet/spreadsheet. If the risk then falls into the "negligible" category (see Policy on previous page), no further risk assessment work needs to be done.

If the risk predicted by BAQEv modeling analysis is still not "negligible," the application will be referred to the NJDEP Air Quality Permitting Program Risk Management Advisory Committee for review. The Risk Management Advisory Committee may recommend that:

1. The applicant applies better air pollution controls to lower emissions.

2. The applicant changes stack characteristics for better dispersion to avoid downwash (for example, increases the stack height).

3. The applicant or the applicant's consultant does a detailed site-specific (refined) risk assessment, based on air quality dispersion modeling.

Permit applications with cancer risks greater than 1 in 10,000 (1×10^{-4}, or 0.0001) will not be approved.